

**Abstract**

[0073] An e-mail processing system that preferably operates solely within nonpersistent storage such as random access memory. Queues of e-mails are formed within the random access memory, where each queue includes a pointer to personalized information about the e-mail, directed to a specific domain. In order to send the e-mail, a channel is opened to the domain, and while open, e-mails within the queue are sent. A special recovery agent periodically takes snapshots of the state of processing within the system. Since the processing is occurring within nonpersistent storage, a failure within the system can be recovered by using the snapshots to recover where each email is processing. In one aspect, the feed rate to the other e-mail servers is adjusted based on the rate of those e-mail servers. Also, the system asynchronously looks up information such as DNS information while it is processing information for other e-mails.